

Mar - May 1969

S A S M E E

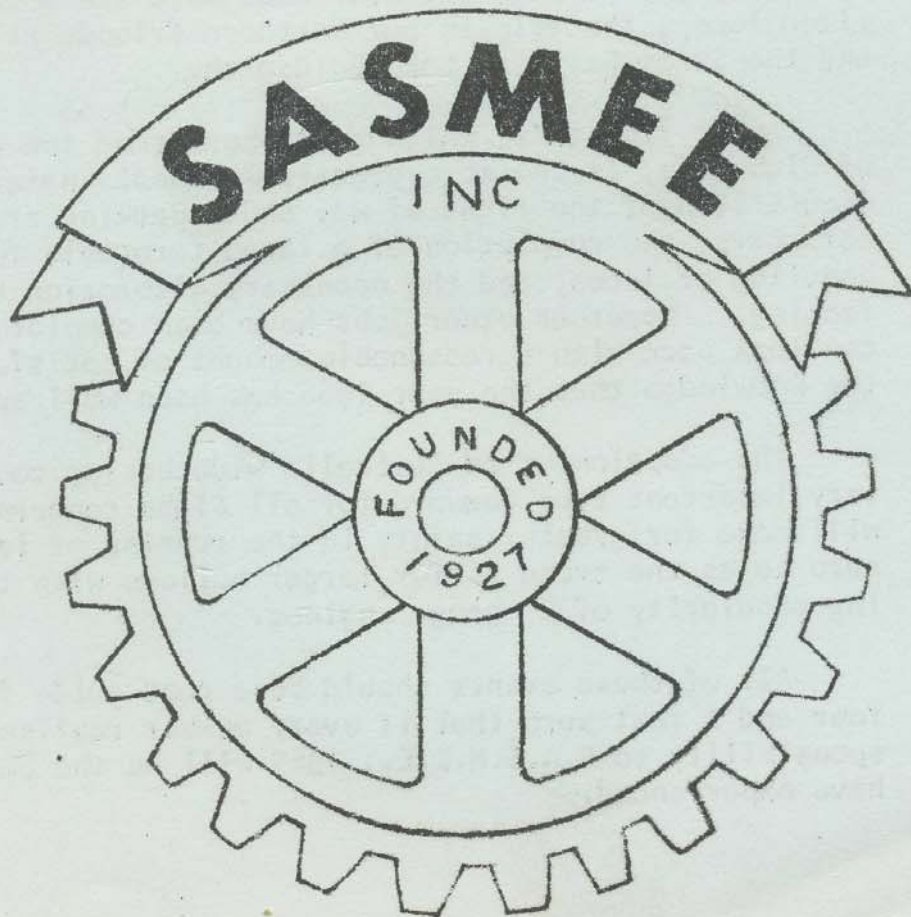
SOUTH AUSTRALIAN SOCIETY OF MODEL
& EXPERIMENTAL ENGINEERS

RETURN THIS BOOK PROMPTLY TO LIBRARY

BULLETIN

THE OFFICIAL JOURNAL OF THE SOUTH AUSTRALIAN SOCIETY

OF MODEL AND EXPERIMENTAL ENGINEERS.



EDITORIAL

Although 1968 is now a fast fading memory I think you will all agree that it was a most satisfying one from our point of view. We have enjoyed on various occasions instructive tours of places of interest, listened to lectures at our meetings on a number of subjects, and have held 12 successful Field Days, well supported by the Public.

The highlights of the year, I suppose, were the Moorabbin Convention last Easter, (I for one will not forget that trip when my car radiator made more steam than a full sized loco), the trip to our Northern Friends at Whyalla, and the Steam Rally at Lake Goldsmith.

Apart from that, which could be termed the social side of Club life, is the more practical aspect, namely : the acquisition of the right of way and a parking area for Members Cars, the completion of a large turntable for the handling of locos, and the necessary alteration to the fencing. Numerous other jobs have been completed and we can look back with a reasonable amount of satisfaction in the knowledge that the year 1968 has been well spent.

The adoption of an Australia wide boiler code was a very important step forward for all Clubs concerned and will make for greater safety in the running of locos, the more so as the trend is for larger boilers with the growing popularity of 5" gauge engines.

All of these events should be a good guide for the New Year and I feel sure that if every member realises his responsibility to S.A.S.M.E.E., 1969 will be the best year we have experienced.

EDITORIAL contd.

We should see several new engines completed or near completion in the coming months, as you will remember there are over 30 under construction. What a magnificent sight they would make all lined up on the track.

A number of members are eagerly looking forward to the Easter Convention in Sydney and probably counting the weeks that must elapse before the 900 mile haul starts.

I would greatly appreciate articles for the Bulletin from members, as after all, this is your paper and one man cannot express the views of everybody, and I feel sure that with your assistance we could make it a better and brighter record of our activities than ever before.

May I wish you all a Happy New Year (a bit late perhaps, but I am controlled by the way our yearly quarters work out) with successful modelling and good steaming.

QUARTERLY AGENDA

GENERAL MEETINGS

1969

2nd Tuesday each month at 8.00 p.m.

11th March

Brains Trust Evening.

8th April

Max Dunkley will speak on his recent Pacific Tour, and will show a number of very interesting slides.

13th May

Annual General Meeting and Election of Officers.

INTERMEDIATE
MEETINGS

(Informal) 4th Tuesday each month at 8.00 p.m. 25th March, 22nd April, 27th May.

COMMITTEE
MEETINGS

1st Tuesday each month at 8.00 p.m.
4th March, 1st April, 6th May.

WORKING BEES

1st Saturday each month at 2.00 p.m.
1st March, 5th April, 3rd May.

PUBLIC FIELD DAYS

3rd Saturday each month at 2.00 p.m.
15th March, 19th April, 17th May.

FIELD DAY CANTEN ROSTER

MARCH

A. BOREHAM
D. ALLAN

APRIL

L.T. MATTHEWS
P. CAVANAGH

MAY

J. THURMER
M. AMBLER

IMPORTANT NOTE

IF UNABLE TO ATTEND AS PER ROSTER
PLEASE PHONE SECRETARY: PH.79-5292
SO THAT A RESERVE CAN BE NOTIFIED
IN TIME.

"Please remember to bring the MILK".

ROSTER FOR LOCKING UP ALL BUILDINGS AND GATE

FEBRUARY	15th	J. WAKEFIELD	APRIL	12th	T. ENGLAND
	22nd	C. HILL		19th	J. WAKEFIELD
MARCH	1st	A. BRABHAM		26th	C. HILL
	8th	J. WELCH	MAY	3rd	A. BRABHAM
	15th	D. IRVING		10th	J. WELCH
	22nd	N. KERNICK		17th	D. IRVING
	29th	O. THOMAS		24th	N. KERNICK
APRIL	5th	B. BROWN		31st	O. THOMAS

S.A.S.M.E.E. CLUB NEWS.

In cool but fine weather we held our December track day and annual Barbecue, and family get together, well attended by the ladies and children.

On the boat pond Norm and Herb put on an excellent display, Norm's hydroplane at times spraying the spectators who crowded too close to the edge, with water. Herb would take his turn and thrill the onlookers with a display of radio-control.

Owing to boiler overhaul the steam house was not operating.

On the loco track drivers were kept busy giving rides to the children, and up top Uncle Al kept up a running commentary of the afternoons events.

The drivers were as follows :

Ralph Skewes	Alan Wallace
John Moorfield	Chas. Hill
K. Bradford	Owen Thomas
H. Pearce	Tom England
J. Wakefield	Morrie Turner
A. Drabham	Clary Burden

(I apologise if I have omitted anybody) C.D.

At the station Ron Collins and Bob Brown supervised the loading of passengers.

Howard Dateup and Serafino Faccenda looked after the Canteen during the afternoon and also while the Barbecue was in progress.

Harry Pearce ran into trouble with his King John early in the afternoon with a melted fusible plug and had to retire.

Page 6.

S.A.S.M.E.E. CLUB NEWS cont.

At about 5.00 p.m. most of the drivers ceased running and cleaned up for the Barbecue. With this over we adjourned to the Club House and were entertained by the antics of Archie and several small boy assistants to the Master of Ceremonies, Uncle Al. After this we settled down to an excellent film show, thanks to the efforts of Chas Hill and Tom England. Shortly after 9.00 p.m. heads began to nod and with a short speech of thanks and Christmas Greetings by our President, one by one we departed well satisfied with a most enjoyable evening.

I noticed Dave Worrell doing a spot of night driving with his 3½" Britannia.

During the afternoon I spoke to Bill Perin, whom I have not seen for some time.

Also present was Max Dunkley, just returned from a Pacific Tour.

Doug Iliffe and his wife were also enjoying the fun. Doug was formerly Hon. Secretary for the Whyall Club, but is now living in Adelaide and has resigned his office. He expects to transfer to S.A.S.M.E.E.

Page 7.

S.A.S.M.E.E. CLUB NEWS cont.

A word of thanks is due to Claude Miller for his good work in the binding of the Model Engineer into volumes. THANKS CLAUDE.

Chas. Hill, with his 3½" Britannia, recently appeared on Television where he gave S.A.S.M.E.E. some useful publicity. The appearance was part of the advertising in connection with the Y.M.C.A. Field Day held in November.

I have just received confirmation from the Unley City Council regarding the direction sign at the entrance to the lane way to assist the public in finding our grounds.

A pleasant and interesting evening was spent at the Adelaide Airport during November when about 35 members were shown over the Fire Protection side of an Airport and were given a demo. of foam and how it copes with aircraft on fire. Other aspects of the terminal were shown to us and were thoroughly enjoyed by all those present.

On 30th November S.A.S.M.E.E. assisted the Northern Districts Y.M.C.A. by means of a Field Day. Owing to previous publicity the crowd attending surpassed all of our wildest guesses, and created a record which will be very hard to beat. Y.M.C.A. benefited to the extent of nearly \$400.00 and expressed their pleasure with the result.

S.A.S.M.E.E. CLUB NEWS cont.

There was an excellent turnout of locos and the boat pond attracted a lot of attention. At times the queue extended from the station back to the tunnel.

I was asked if we could do a similar show about the same time this year, so great was their appreciation of our efforts.

All members assisting deserve a word of thanks for making a worthy cause a great success.

On Sunday 30th November, I attended the Exhibit of Transpo held at Blackwood and took along Britannia set on rollers. It was steamed up and ticked over for 4 hours, and attracted a large crowd. I was asked a lot of questions regarding S.A.S.M.E.E. and handed out a number of leaflets outlining our activities. During the afternoon Owen brought up his Meredith to help matters along, and his engine had its share of admirers.

- - - - -

At a recent Field Day Clary Hall of Melbourne brought along his traction engine; soon had it in steam and members spent an interesting time asking questions and watching it operate.

- - - - -

Fred Hercus gave members useful hints and tips at the November meeting when he spoke on Jigs and Fixtures. Fred with his vast experience of engineering is worth listening to and we are indebted to him for his talk.

- - - - -

S.A.S.M.E.E. CLUB NEWS cont.

Mrs. Betty Doreham and Chas Hill's secretary deserve a word of recognition for their services in the setting out and printing of the Bulletin, and we are deeply appreciative of both of you and your help.

No doubt, most members when making their New Year Resolutions included the very important one of regularly attending Working Bees during the year. Apart from getting the various jobs done, attending the Work-Bees is an excellent way, particularly for new members, of getting to know the other chap who is probably just as keen to know you.

I am glad to report that Ralph Stephens, who has spent a month in hospital with a heart attack, is now home and is on the mend. He hopes to be able to attend the February track day if all goes well, and we all wish you a quick and permanent recovery.

I have received a cheery letter from Dud Smith of Lodden Vale. He mentions that he expects to be in Adelaide during March. To those of us who have met Dud, it will be a great pleasure to have him with us and show him around.

S.A.S.M.E.E. CLUB NEWS cont.

We are pleased to welcome new members, Robert Smyth, interested in locos, and Junior member, Hans Breth, who is keen on model boats and locos. We hope that you will join in all of our activities and spend many happy hours constructing the type of model that you are interested in.

- - - - -

Bulletins have been received from Lake Macquarie Live Steam Society, Illawarra Live Steamers, and the Steam Locomotive Society of Victoria.

- - - - -

At the January General Meeting it was decided to conduct the Annual Election of Officers in May, by the use of nomination papers to be in the hands of the Secretary by 9.00 p.m. of the Annual Meeting.

With this Bulletin you will receive a list setting out the various Officers with a space to be filled in by the member making the nomination, and seconder, and also a space to be signed by the nominee.

Your co-operation is requested in this matter.

- - - - -

Congratulations to Chas Hill in his appointment as Managing Director of Unbehaun and Johnstone. We all wish you every success Charles, and trust that your new duties will not interfere too greatly with your loco work.

- - - - -

S.A.S.M.E.E. CLUB NEWS cont.

During a recent conversation with Fred Hercus I asked him about the track he has been constructing in the hills at Stirling. He told me that the track (3½" & 5") is completed, also a bridge, but owing to early summer rains he has suffered several minor landslides, which need to be cleaned up and also a terrific growth of grass, etc. along the line.

He hopes to have things in working order in about 2 months time, and is anxious to give his new RX its maiden run. This engine has been completed for some months, but has only been run on air and operates very well, so we can soon look forward to seeing it under actual working conditions.

Mention must be made of Jim Thurmer's talk on Photography at a recent meeting. It was certainly an eye-opener to many of us, and his list of hints and tips will be appreciated by all who follow this hobby.

LAKE GOLDSMITH STEAM ENGINE PRESERVATION SOCIETY.

Summer Steam Festival, 2nd & 3rd November 1968, reported by Brian Niesche.

The United State's Consul for Victoria, Mr. E.C. Howatt, officially opened this years Summer Rally when approximately 4,000 enthusiasts and spectators enjoyed two days of enthralling activity, held under ideal conditions on George Mulcahys' property at Lake Goldsmith near Beaufort (Victoria).

SUMMER STEAM FESTIVAL cont.

Exhibits included 12 portables, 6 traction Engines, 2 Rollers and 2 Threshing machines. The majority of these were in steam together with numerous stationary engines and a fine display of model engines all working on steam supplied by a donkey boiler. There were also 2 working model traction engines - a 1½" scale Allchin by M. Turner and a 2" scale single cylinder built by Clarrie Hall.

These drew large crowds of onlookers as their owners set them in motion, particularly the larger engines, with Clarrie driving from a riding truck towed behind.

An oval elevated rail track in 5" and 3½" gauge sported several models including a beautiful 3½" Virginia.

A sprinkling of old kerosene tractors chugged and banged their way around the paddock, as did several old motor cycles, some beautifully restored. A new addition this year were a sizeable entry of vintage cars and together with the antique motor-cycles, added more color to this historic display of machinery.

During the Sunday afternoon the Central Highland Model Flying Society provided a display of controlled line flying model aeroplanes.

Six events were held for traction Engines which included a tug-o-war, steering competitions and a slow race which was won by R. Rogers of Ballarat on "Tiny" - an Aveling and Porter which saw the light of day as a roller and later converted by the late Tom Rogers, who fitted a new front axle and wheels from a Clayton and Shuttleworth Steam wagon. The grand parade made an impressive sight with every self propelled vehicle travelling head to tail around the arena to the accompaniment of much tooting of whistles!

SUMMER STEAM FESTIVAL cont.

The "Star" turn of the Rally was a sheep shearing demonstration by Bill & Bob Kirkpatrick. A small Brown and May portable with outrigger attached, held the mechanism for driving the shears, the necessary power taken by belt off the fly wheel. At one stage 2 sheep were shorn simultaneously, whilst the engine's owner - a lad in early teens, proudly tendered the controls. An exhibition of spinning raw yarn with the aid of an old treadle powered jenny, completed this working exhibit.

Some impromptu excitement was provided during unloading operations of T.K. Brown's massive 20H.P. Ruston Proctor Portable from its low loader. After the prime mover was removed, jacks and blocks were placed beneath the loader in readiness to run the engine off on ramps, but the jacks slipped and the blocks sunk into the ground. Eventually the correct height was established and a rigid tow made to the 8 H.P. Single Fowler T.E. but as the relatively narrow wheels of the large portable touched the ground the T.E. began to labour and eventually the hind wheels lost traction. Then the 8 H.P. Foden Single T.E. was coupled up by a rope to the Fowler and together tried to shift the load, but the Foden's wheels suffered the same fate. Finally with a wire rope attached to the Foden's winding drum and hind wheels chocked, the Fowler and the portable slowly chuffed their way to firmer ground.

To add even further to what proved to be an enthusiasts delightful weekend, a film show was organised on the Saturday night in the century old single room stone school near the edge of the Lake and but a mile from the Rally site. A large open fire place dominated the room and an equally large log fire kept out the nip in the air. Some 90 odd patrons crowded into the small room and for those who came early and enjoyed the luxury of a plank on oil drums! thrilled to a color feature "The Reluctant Maiden" depicting the Woburn Abbey T.E. Rally, together with an interesting film

SUMMER STEAM FESTIVAL contd.

by the Case Tractor Co. "When Steam was King", plus selected shorts for the younger fry. This excellent show was arranged and shown by Trevor Triplow of Adelaide. Other Adelaide and S.A.S.M.E.E. visitors included John Norris (President L.G.S.E.P.S.) Messrs. Wakefield, Turner, Niesche, Pearce, Small, Mell and Hercus.

3" SCALE "ALLCHIN" TRACTION ENGINE by Paul Griscti.

Because of the larger than usual size of this model it requires some re-thinking of the usually accepted methods of building. Where possible, the materials used are the same as the original prototype.

As a result of a number of disappointments brought about by following the written description of the 1½" scale version, I offer the following suggestion - BUILD THE BOILER SHELL FIRST.

Then fit your hornplates and tender to it. It is not necessary to finish the boiler at this stage as the outer shell of a boiler made from ¼" steel is quite rigid at this stage. With the backhead and firebox missing you can still get inside the shell to fit strengthening plates, bushes, etc.

Because I could not get a scale size piece of tube and could not get one rolled at a reasonable cost, a slightly oversized tube was purchased. This meant scrapping the partly finished tender, and as this was 1/8" steel plate this can be rather disappointing.

The front axle is made from a length of 3" x 1" 'Vibrae' and is shaped by using a hand hacksaw, rows of drilled holes and files, the ends being turned on a 3½" centre lathe.

"ALLCHIN" TRACTION ENGINE cont.

Quite a few hacksaw blades and files found their way into the rubbish bin in the process. The front wheels are made as follows. The rims are cast in sem-steel and machined all over on a friend's lathe. The hubs are machined from slices cut from a 3" bar of steel, with the slots for the spokes milled in the lathe. The spokes are made in a manner devised to overcome milling problems in a lathe which had not enough travel on the cross slide. The spoke is made out of two pieces of steel arc welded together in a special welding jig. This jig has a copper lined base with a groove on it to allow the formation of a bead on the bottom face of the spoke which is welded in one piece. Next the spokes were cleaned up both sides and a punch was made up to punch out the corners. This block was used under a hydraulic press. Only one side was punched on each spoke and then after fitting a location peg to the block the other sides of the spokes were punched. It was found that the steel varied in hardness and took an average of 2,000 lbs. per sq. inch whilst the harder ones went to 3,000 lbs. per sq. inch. If anyone uses this method I would suggest annealing the spokes after welding. The die was made of mild steel lightly case hardened, and the punch from high carbon steel cut from the end of a crow bar. The crow bar is now 3" shorter, but who wants to dig holes when there are models to make. A side benefit is that two more punches and the crow bar will be light enough for the wife to use. Finally the spokes were cut to shape on a metal cutting band saw, having learnt my lesson on the front axle. The wheel was assembled in a wooden jig, and no problems were experienced except for riveting as 3/16" iron rivets take quite some effort to get them neatly formed. The assembled wheels with cast iron hubs do not require bushing.

The hornplates and spectacle plates, with all bearings, shafts, and hind axle is built as a separate assembly, as if making up a gear box, and the distance between the hornplates is wider than the overall width of the boiler at the

"ALLCHIN" TRACTION ENGINE contd.

forebox end. Welded to the boiler sides are strips top and bottom, which are faced to an accurate dimension of the hornplate assembly. The ends of the firebox stays are filed to correspond with these strips.

This method is adopted because the boiler is built to full size boiler code with $\frac{1}{4}$ " wall thickness and the hornplates if part of the boiler would be too thick and spoil the general appearance.

This has the added advantage of breaking the model down into 4 main sub assemblies and each assembly - front wheels - boiler - hornplates - tender is quite weighty on its own.

Because of the need to try these assemblies together and take them apart again a special building stand was made from angle iron. This stand or frame allows any part to be placed in and out of position without affecting any other part.

Using cradles bolted to 8" lengths of angle iron which are bolted to the base with $\frac{5}{16}$ " bolts in $\frac{3}{8}$ " slots. (The $\frac{1}{16}$ " play allows some sideways adjustment) each assembly is supported individually.

General Comment.

If you want to build a model in a short time take heed. Choose a design where the patterns, and, or castings are available, as most of my time has been spent making patterns and apart from the wheels most of the castings are one off, and most take longer to make than the time required to machine the finished casting. The curse of being a patternmaker is that having made the patterns I like to see them carefully stored, and storage of patterns takes up valuable space in a cramped home workshop.

"ALLCHIN" TRACTION ENGINE contd.

Most of the machining has been carried out either on a $3\frac{1}{2}$ " centre 'Advance' lathe or a $4\frac{1}{2}$ " 'Hercus' model B lathe, only the flywheel and wheel rims being done on a larger lathe. By reworking two old lathe centres so that they projected from the headstock and tailstock, having the tailstock just half on the bed, and sliding the headstock back $\frac{1}{4}$ " (Temporary) on a 'Hercus' lathe, it was just possible to machine the back axle out of $1\frac{1}{2}$ " dia. bar. As nothing fits the centre portion of the back axle this I realise is not necessary as a length of $1\frac{1}{4}$ " dia. shafting with two collars of $1\frac{1}{2}$ " dia. material fixed at each end to fit the main bearings would work just as well as the axle is only as strong as its smallest diameter.

All flanging of tender plates has been done cold on a few suitably shaped mild steel stakes, as steel being more rigid than brass or copper it is not necessary to sandwich it between former plates. The only part formed hot was the angle iron rim on the spud pan which tended to loose its section when attempted cold.

When finally completed will I build another 3" scale T.E.? To quote the "Bard of Brompton" "MY PLURRY OATH" as I have hopes of at least two more with an inkling of a third, which just goes to prove you don't have to be mad to be a model engineer but it helps.

Thanks Paul for an interesting article.

C.B.

EDITED BY: C. BURDEN, HON. SEC.,
123, ALLINGA AVENUE,
GLENUNGA, 5064.

PRINTED BY: HILL - ENGLAND ENTERPRISE

PATRON

Mr. R.J. Fitch

Commissioner, S.A.R.

VICE-PATRONS

Mr. A. W. Crossman
Mr. C. Schaumlöffel

C.M.E. S.A.R.,
Loco Superintendant S.A.R.

OFFICE BEARERS

President	Mr. John Wakefield
Vice Presidents	Messrs. T. England, N. Kernick
Immediate Past President	Mr. J. Welch
Secretary	Mr. C. Burden
Minutes Secretary	Mr. D. Irving
Treasurer	Mr. R. Excell
Assistant Treasurer	Mr. N. Kernick
General Committee :	Messrs. A. Brabham, B. Brown, C. Hill, O. Thomas.
Librarians :	Messrs. G. Calvert, D. Irving.
Auditors :	Messrs. M. Dunkley, F. Hercus
Public Officer	Mr. M. Turner
Host :	Mr. H. Pearce
Director - Field Days	Mr. A. Frankham
Supervisors - Loco Track	Messrs. B. Brown, P. Griscti, R. Stephens
- Boat Pond	Mr. N. Kernick
Boiler Attendants	Messrs. M. Grimshaw, J. Mell
Boiler Safety Committee	Messrs. A. Brabham, M. Dunkley A. Symes, O. Thomas
Sub-Committee - Programme	Mr. A. Frankham
Canteen	Mr. J. Moorfield